

**What is claimed is:**

1. An apparatus for reducing power consumption in a mobile communication device having a backlight illumination unit powered by a voltage source, comprising:

converting means adapted to provide a constant voltage output;

enabling means adapted to turn the converting means off and on; and

switching means adapted to apply one of the output of the voltage source and the constant voltage to the backlight illumination unit.

2. The apparatus of claim 1, further comprising comparing means adapted to determine whether the output of the voltage source is at least a predetermined value and wherein the converting means is turned off and the output of the voltage source is applied to the backlight illumination unit when the output of the voltage source is at least the predetermined value and the converting means is turned on and the constant voltage is applied to the backlight illumination unit when the output of the voltage source is below the predetermined value.

3. The apparatus of claim 2, further comprising scaling means adapted to divide the output of the voltage source by a designated factor.

4. The apparatus of claim 3, wherein the designated factor is approximately 50%.

5. The apparatus of claim 2, wherein the comparing means converts the output of the voltage source to digital data and determines if the digital data corresponds to the predetermined value.

6. The apparatus of claim 5, wherein the comparing means comprises an analog-digital converter.

7. The apparatus of claim 1, wherein the converting means is one of a charge-pump and a DC-DC converter.

8. The apparatus of claim 1, further comprising a second enabling means adapted to turn the backlight illumination unit off independent of the converting means.

9. The apparatus of claim 8, wherein the second enabling means comprises a transistor.

10. The apparatus of claim 1, wherein the switching means comprises a FET.

11. An apparatus for reducing power consumption in a mobile communication device having a display, comprising:

a voltage source;

a backlight illumination unit adapted to illuminate the display;

a converting unit adapted to provide a constant voltage to the backlight illumination unit;

a switching unit adapted to bypass the converting unit and apply the output of the voltage source to the backlight illumination unit; and

a controller adapted to determine the output voltage of the voltage source, turn the converting unit off and on, and enable and disable the switching unit.

12. The apparatus of claim 11, wherein the controller turns off the converting unit and enables the switching unit when the output of the voltage source is at least a predetermined value.

13. The apparatus of claim 11, further comprising a scaling unit adapted to divide the output of the voltage source by a designated factor.

14. The apparatus of claim 13, wherein the scaling unit comprises at least one resistor.

15. The apparatus of claim 13, wherein the designated factor is approximately 50%.

16. The apparatus of claim 11, wherein the controller is adapted to convert the output of the voltage source to digital data.

17. The apparatus of claim 16, wherein the controller comprises an analog-digital converter.

18. The apparatus of claim 11, wherein the converter is one of a charge-pump and a DC-DC converter.

19. The apparatus of claim 11, wherein the controller is adapted to turn off the backlight illumination unit and converting unit independently.

20. The apparatus of claim 11, wherein the switching unit comprises a FET.

21. A mobile communication device, comprising:
- a display;
  - a backlight illumination unit adapted to illuminate the display;
  - a voltage source adapted to provide power to the backlight illumination unit;
  - a converter, an output of which is a constant voltage;
  - a switch adapted to apply one of the voltage source and constant voltage to the backlight illumination unit; and
- a controller adapted to turn the converter off and apply the output of the voltage source to the backlight illumination unit when the output of the voltage source is at least a predetermined value and adapted to turn the converter on and apply the constant voltage to the backlight illumination unit when the output of the voltage source is below the predetermined value.
22. The device of claim 21, wherein the predetermined value is approximately 4 Volts DC.
23. The device of claim 21, wherein the converter is one of a charge pump and a DC-DC converter
24. The device of claim 21, wherein the backlight illumination unit comprises two or more LEDs.
25. The device of claim 21, wherein the controller comprises a CPU.
26. The device of claim 21, wherein the controller comprises a GPIO.

27. The device of claim 21, wherein the display is an LCD.

28. A method for reducing power consumption in a mobile communication device having a backlight illumination unit powered by a voltage source, comprising:

providing converting means, an output of which is a constant voltage, and switching means adapted to apply one of the output of the voltage source and the constant voltage to the backlight illumination unit;

measuring the output voltage of the voltage source; and

turning the converting means off and applying the output of the voltage source to the backlight illumination unit if the output of the voltage source is at least a predetermined value and turning the converting means on and applying the output of the converting means to the backlight illumination unit if the output of the voltage source is below the predetermined value.

29. The method of claim 28, further comprising scaling the output of the voltage source by a designated factor.

30. The method of claim 29, wherein the designated factor is approximately 50%.

31. The method of claim 28, further comprising:

converting the voltage of the voltage source to digital data; and

comparing the digital data to data corresponding to the predetermined value.

32. The method of claim 28, wherein the constant voltage output of the converting means is at least the predetermined value.

33. The method of claim 28, further comprising turning off the backlight illumination unit independent from the converting means.